Idaho Standard Method of Test for

Testing Thickness of Plastic Concrete Pavement

Idaho IT-130-02

1 Scope

1.1 This method is used with plastic concrete pavements to determine concrete pavement thickness while the paving machine is in position and necessary adjustments can be made. This method is used to calculate thickness incentives and disincentives when applicable.

2 Apparatus

2.1 Measuring probe.

2.2 Cleaning cloth.

2.3 Masking tape.

2.4 Tape measure.

2.5 Recording form.

2.6 Bucket.

3 Test Procedure

3.1 All thickness measurements will be taken as efficiently as possible, without disruption of the paving process, from the catwalk located on the backside of the paver.

3.2 The measuring probe shall be placed with its disk flush with the pavement surface. The inner probe shall then be inserted through the full depth of plastic concrete pavement and the thickness shall be measured to the nearest 0.05 in. (millimeter) and recorded on the *ITD-827*, *Plastic P.C.C. Pavement Thickness Recording Form*.

3.3 Following each measurement, the probe shall be wiped clean.

4 Longitudinal Locations Of Measurements

4.1 The depth measurements shall be taken randomly in the fresh concrete at a rate of one (1) set of probes for each test section.

4.2 Each test section shall be no greater than 0.1 mi. (0.2 km) long.

4.3 The width of a test section shall be a single placement width as defined in Section 5.

4.4 The concrete thickness determined by the set of probes will represent the thickness for the entire area of the test section. The average of the probe measurements shall equal one (1) test (see Section 6).

5 Transverse Locations of Measurement

5.1 For each separate placement, thickness measurements are normally made within 1 ft. (300 mm) of the center of each driving lane and near each edge of each driving lane. When adjacent lanes are placed simultaneously, a single measurement made within 1 ft. (300 mm) of the common lane boundary will represent that edge of both lanes. When a placement includes shoulders, edge measurements may be made either on the lane side or shoulder side of the lane boundary, but should be within 1 ft. (300 mm) of the lane boundary unless special circumstances dictate otherwise (see Section 5.5). When a placement does not include shoulders or when adjacent lanes are not placed simultaneously, make depth measurements at least 1 ft. (300 mm) away from placement edges, but normally not more than 2 ft. (600 mm) away from such edges. Use care to avoid striking and displacing tie bars or dowel bars when making depth measurements.

5.2 Examples of some placement variations and their measurement locations are as follows.

Placement Type	No. of Meas.	Locations of Meas.
1 lane, no shoulders	3	Within 1 ft. (300 mm) of lane center and between 1 ft. (300 mm) and 2 ft. (600 mm) from placement edges.
1 lane, 1 shoulder	3	Within 1 ft. (300 mm) of lane center, within 1 ft. (300 mm) of lane-shoulder boundary, and between 1 ft. (300 mm) and 2 ft. (600 mm) from the lane edge, which is placed against a form (including slipform) or against existing concrete.
2 lanes, no shoulders	5	Within 1 ft. (300 mm) of lane centers, within 1 ft. (300 mm) of common lane boundary, and between 1 ft. (300 mm) and 2 ft. (600 mm) from placement edges.
2 lanes, 2 shoulders (The example on page 5, Form ITD-827, corresponds to this type of placement on an interstate highway.)	5	Within 1 ft. (300 mm) of lane centers, within 1 ft. (300 mm) of common lane boundary, and within 1 ft. (300 mm) of lane-shoulder boundaries.

- In cases where a tapered or an unusual pavement width is being placed, engineering judgment shall be used to determine where thickness measurements are made. Avoid taking all thickness measurements at locations where grading stakes were positioned.
- After determining where depth measurements shall be taken for any section, the inspector may mark these locations on the paver catwalk with masking tape for convenience.

- When the subgrade base for placement of the concrete pavement is quite irregular in transverse or longitudinal grade, or if other special circumstances exist, this test method may be modified as to measurement locations to assure representative sampling. Record such changes on the ITD-827 and document reasons in the Daily Diary.

6 Analysis of Data

6.1 All thickness measurements taken at each test section location during one (1) pass of the paver shall be averaged. Record the average to the nearest 0.1 in. (2.5 mm).

6.2 AASHTO T 148 (for measuring core lengths) was used as a guideline in establishing the depth increment to be used in recording individual measurements. Also, the roundoff procedure for the average at each thickness measuring station is the same as the procedure used in AASHTO T 148.

6.3 With careful correlation between the thickness measurements and paving machine adjustments, there should be no need for concrete pavement thickness deficiency penalties. Smoothness must be carefully maintained during each adjustment of the paver.

6.4 Care must be exercised on horizontal and vertical curves to avoid excess depths at the low side of horizontal curves and the lowest area in sag-vertical curves. The converse situations of thin pavements at the high side of horizontal and vertical curves must be carefully controlled to achieve the specification thickness.

ITD-827 8-98 W

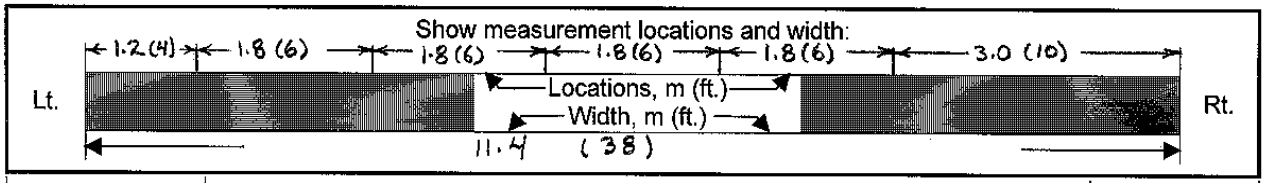
PLASTIC P.C.C. PAVEMENT THICKNESS RECORDING FORM

For use with Idaho T-130

Sheet 1 of X

Key No. XXXX Project No. I-84-X(XX)XX

Inspector's Name I. D. Hoe Date 5-20-98



Station(s)	Distance from Transverse Edge or Longitudinal Start, m (ft.), and Depth Measurements, mm (in.)						Ave. per Sta., mm (in.)
EB							
0+15 m	301	297	295	298	300		297.5
0+50	306	302	310	315	309		307.5
0+90	307	310	312	314	308		310.0
1+50	311	309	304	301	307		307.5
3+00	309	311	313	310	314		312.5
4+50	306	310	308	305	307		307.5
6+00	308	309	312	305	310		310.0
7+50	312	315	310	313	309		312.5
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EB							
0+50 ft	11.85	11.70	11.50	11.75	11.80		11.7
1+50	12.05	11.90	12.20	12.40	12.15		12.1
3+00	12.10	12.20	12.30	12.35	12.15		12.2
5+00	12.25	12.15	11.95	11.85	12.10		12.1
10+00	12.15	12.25	12.30	12.20	12.35		12.2
15+00	12.05	12.20	12.15	12.00	12.10		12.1
20+00	12.15	12.15	12.30	12.00	12.20		12.2
25+00	12.30	12.40	12.20	12.30	12.15		12.3